Online systems are essential for accurate, timely data

Modern machinery management systems, including TPM, require accurate, timely machine data. Walkaround, or portable, data collection systems have inherent limitations that make them unsuitable as a data source for a sophisticated maintenance program.

Industry research has found that two readings, taken by hand at the same machine point, can differ by:

- 191%, if the same person takes both readings with a handheld transducer.
- 275%, if a different person takes each reading with a handheld transducer.
- 50%, even if a magnetically-based transducer is used.

The reasons:

- A handheld probe can be improperly positioned on the machine.
- A handheld probe's reading varies with the pressure applied to it.
- A handheld probe's reading varies if it is held unsteadily during data collection.
- A handheld probe must oriented at the same angle to the machine for every sample.
- If more than one person collects data, it is likely that differences in technique will affect the reading.
- Different types of probes may be used on same point at different times.

A reliable machine condition database cannot be built from unreliable data. An online system suffers from none of the limitations of a walkaround system.

Online systems

Online systems acquire, reduce and trend data automatically. Systems that also communicate with plant and DCS computers make decision-making easier, because vibration and process data is continually avaliable to operators, engineers and managers. The most effective online systems also transfer data over phone lines, so machinery specialists need not travel to analyze machine condition. Online systems quickly pay for themselves, in reduced labor costs and improved machine performance.

Bently Nevada's online systems communicate with plant and DCS computers, and can be accessed remotely through the phone lines. They display and print both current and trend data in several plot formats, for fast, accurate analysis. Our online systems reduce machine maintenance and operation costs.

Dynamic Data Manager® 2 (DDM2) and Transient Data Manager® 2 (TDM2) are our online systems for critical machinery. Both continually acquire, reduce and trend vibration and process data: DDM2 during steady state machine operation, TDM2 during both steady state and transient operation. Both systems network with our Engineer Assist™ expert system, which analyzes and explains the data, and suggests repair and operation options.

Trendmaster® 2000 for Windows is our online system for general-purpose machinery. Its shared data cables reduce installation costs, and it can monitor any number of vibration and process transducers.

We are the world leader in online vibration measurement systems. Call your nearest sales representative, and we'll show you why. ■